Plants

Cyrtandra waiolani

SPECIES STATUS:
Genetic Safety Net Species
IUCN Red Ranking – Extinct in the Wild (EW)
Hawai'i Natural Heritage Ranking - Possibly Extinct (GH)
Endemism – O'ahu

SPECIES INFORMATION: Small shrubs ca. 1 - 2 m tall; stems few branched. Leaves opposite, borne on upper 2 - 5 nodes, those of a pair unequal, symmetrical or nearly so, chartaceous, elliptic, 5 - 16 cm long, 1.5 - 5.5 cm wide, upper surface moderately hirsute, lower surface moderately to sparsely velvety pilose, margins remotely and irregularly dentate, apex acuminate, base cuneate to attenuate, petioles 1.3 - 5 cm long, shaggy hirsute. Flowers 1 - 2 in cymes arising in the leaf axils, densely brownish villous throughout, peduncles 3 - 35 mm long, pedicels 3 - 22 mm long, bracts lanceolate, 5 - 11 mm long; calyx nearly actinomorphic, greenish white when fresh, 11 - 15 mm long, enlarging up to 20 mm long in fruit, cleft to base, the lobes linear to oblong lanceolate, both surfaces densely brownish villous, except the lower 3 - 4 mm on inner face glabrate; corolla white, tube cylindrical, 14 - 18 mm long, ca. 3 - 4 mm in diameter, densely villous, upper lobes reniform orbicular, ca. 2 - 3.5 mm long, ca. 4 mm wide, lower lobes very broadly elliptic ovate, 3.5 5 mm long, 4.5 5 mm wide; ovary glabrous; style ca. 3 mm long, glabrous to pilose. Berries white, ellipsoid, 1.2 - 1.8 cm long, pilose above the middle. Seeds 0.35 - 0.45 mm long.

DISTRIBUTION: Endemic to Ko'olau Mts. of O'ahu, Kalihi through Kaipapa'u Valleys.

ABUNDANCE: Not well known, but one plant was observed at Kahana in 2005.

LOCATION AND CONDITION OF KEY HABITAT: Occurring in wet gulch bottoms in mesic valleys, ca. 520 - 610 m.

THREATS:

- Habitat degradation by feral pigs;
- Fruit predation by rats;
- Competition from alien plant species;
- Stochastic extinction;
- Reduced reproductive vigor due to the small number of remaining individuals.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but also establish further populations to reduce the risk of extinction. In addition to common statewide and island conservation actions, specific actions include:

- Survey historic range for surviving populations;
- Establish secure *ex-situ* stocks with complete representation of remaining individuals;
- Augment wild population and establish new populations in safe harbors.

MONITORING:

- Survey for populations and distribution in known and likely habitats;
- Monitor exclosure fences for damage and inside exclosures for signs of ungulate ingress;
- Monitor plants for insect damage and plant diseases.

RESEARCH PRIORITIES:

- Develop proper horticultural protocols and pest management;
- Survey *ex-situ* holdings and conduct molecular fingerprinting;
- Conduct pollination biology and seed dispersal studies;
- Map genetic diversity in the surviving populations to guide future re-introduction and augmentation efforts.

References:

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, http://www.hinhp.org/printpage.asp?spp=PDMAL0H0A0.

International Union for Conservation of Nature and Natural Resources, 2004, IUCN Red List of Threatened Species: Data Base Search, http://www.redlist.org/search/search-basic.html.

Wagner, W.L.; Herbst, D.R.; Sohmer, S.H., 1999. Manual of the flowering plants of Hawai'i--Revised Edition. Honolulu, HI: University of Hawaii Press and Bishop Museum Press. 1853p.